SERVICE MANUAL

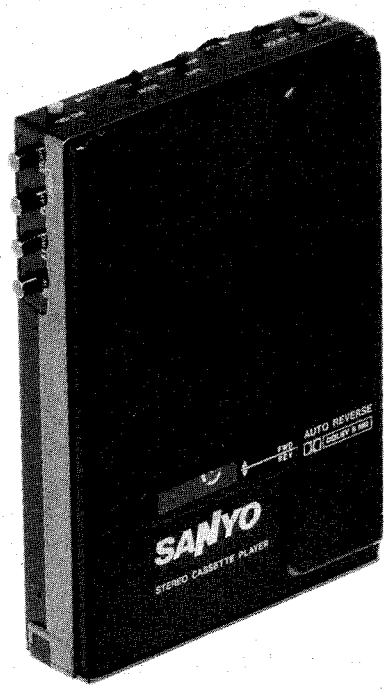
SANYO

AT 17

JJ-P4 (WEST GERMANY)

STEREO CASSETTE PLAYER

PRODUCT CODE No.
142 473 26 (Black)
142 473 27 (White)
142 473 28 (Red)



SPECIFICATIONS

Power Source	
DC	1.5V
Ni-cd battery	NB-450
or (UM-3, HP 7, AA Cell, Mignonzelle, R 6) x 1	
Output Power	3.5mW x 2 (Max.)
Current Consumption (at Vol. Min.)	
Playback mode	180mA
Fast Forward/Rewind mode	300mA
Tape Speed	1-7/8ips. ±3%
Fast Forward/Rewind Time	200sec. (with C-60)
Torque	
Playback	25 ~ 40g-cm
Fast Forward/Rewind	More than 45g-cm
Wow & Flutter	0.6%, RMS
Frequency Response (P/B Dolby OFF)	
Fe_2O_3	63Hz ~ 10,000Hz
Signal to Noise Ratio (w/Fe_2O_3)	More than 42dB
Crosstalk (w/Fe_2O_3)	
Track to Track	More than 50dB
Channel Separation (w/Fe_2O_3)	More than 20dB
Hum & Noise (at Vol. Min.)	−70dBs
Terminal Impedance	
Headphones	8 ~ 100Ω
Dimensions (Max.)	69.8(W) x 104.5(H) x 18.5(D)mm
Weight (w/o batteries)	138g

–Specifications subject to change without notice.–

A47500

REFERENCE No. WM-21014

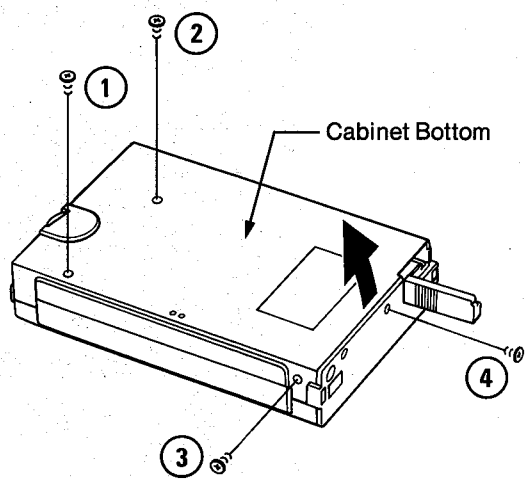
DISASSEMBLY INSTRUCTIONS

GENERAL REMARKS

- Before disassembling the unit, spread a soft rubber mat or a cloth on the workbench to avoid scratches and grease stains.
- Do not use a material which is likely to cause static electricity because transistors and ICs may be easily damaged by it.
- Reassemble the unit, noting the kinds of screws, the soldering and arrangement of the leads. Refer to "Circuit Diagram and Exploded Views" for correct assembly.
- Before disassembling the unit, take out the cassette tape and the batteries.
- Reassemble in reverse order.

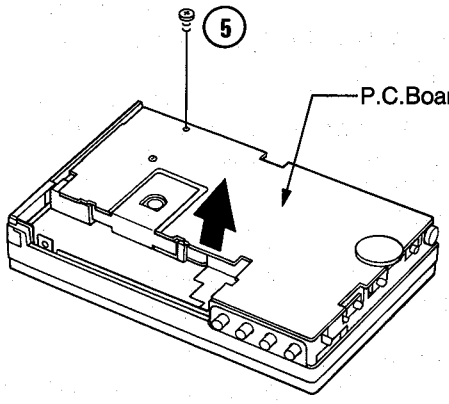
CABINET BOTTOM REMOVAL

1. Remove the four screws (1 ~ 4) fastening the CAbinet Bottom and open the battery compartment lid.
2. Detach the Cabinet Bottom by lifting it in the direction of the arrow.



P.C.BOARD REMOVAL

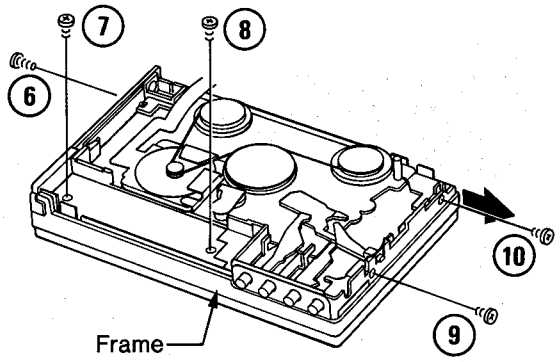
1. Detach the Cabinet Bottom, and unsolder the lead wires (black and red) from the battery terminals and the Reverse switch leads (red and blue) from the switch.
2. Remove the screw (5) detach the P.C.Board by lifting it in the direction of the arrow.



3. Turn over the P.C.Board toward the back of the unit with caution not to damage the FPCs of the Motor and Head.

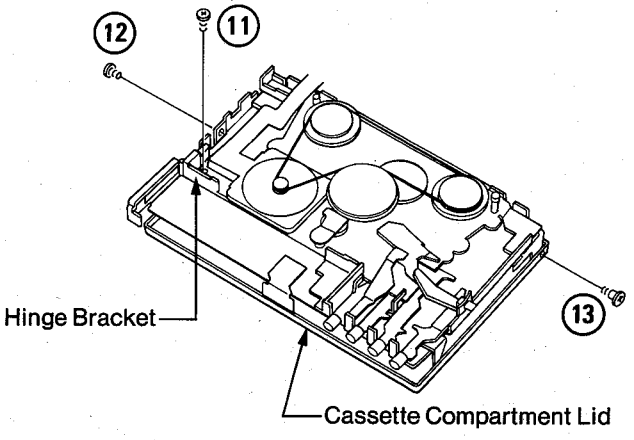
FRAME REMOVAL

1. Detach the P.C.Board, and remove the five screws (6 ~ 10).
2. Detach the Frame by pulling it in the direction of the arrow.



CASSETTE LID REMOVAL

1. Detach the P.C.Board and Frame adn remove the screw (11) to detach the Hinge Bracket.
2. Remove the two screws (12 and 13) and detach the Cassette Compartment Lid after opening the Lid by pressing the STOP/EJECT button.



ADJUSTMENT PROCEDURES

GENERAL REMARKS

- Before adjusting the mechanism of this unit, wipe the tape contacting surfaces clean as well as the contacting surfaces of the driving parts with a cotton swab or a soft cloth soaked in alcohol. Trouble may occur because of oil and grease stains.
- Handle the belt carefully the because grease easily attaches to it. Then check the used rubber parts. If the rubber has deteriorated or is scratched, replace the parts with new one.
- This model features the Auto Reverse Mechanism. Then the tape transport direction is distinguished as follows:
  - **FORWARD DIRECTION:**
    The tape is wound counter-clockwise.
  - **REVERSE DIRECTION:**
    The tape is wound clockwise.
- When performing the adjustment while playing back the test tape, set the tape transport to the **FORWARD DIRECTION**.

EQUIPMENT REQUIRED

- Frequency Counter
- Dualtrace Oscilloscope
- VTVM (2 sets)
- Dummy Load (16Ω)
- Test Tapes
  - 3kHz test tape (Example: TEAC MTT-111)
  - 10kHz test tape (Example: A-BEX TCC-153)
- Alignment Tool

NOTE:

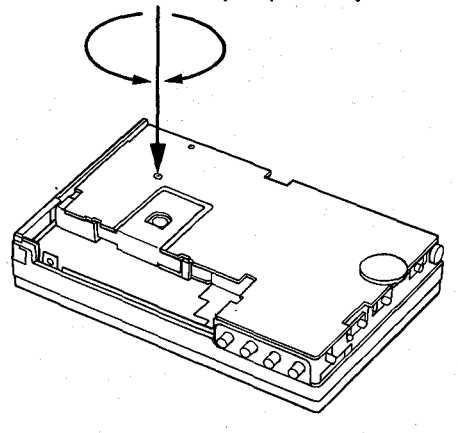
Before the Adjustments, set the control and switch as follows:

- Dolby NR Switch ..... OFF
- Volume Control ..... As desired
- Supply the regulated DC 1.5V power to the Ext. Power Jack for the adjustment.

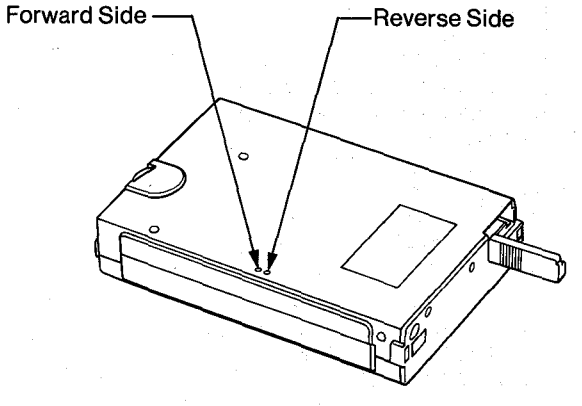
■ ADJUSTMENT PROCEDURE

Adjustment Item	Connection	Dummy Load	Measuring Instrument	Test Tape	Adjustment	Measuring Value
Tape Speed	Headphones	16Ω	Frequency Counter	TEAC MTT-111	P301	3,000Hz ±3%
Head Azimuth			VTVM	A-BEX TCC-153	Azimuth Screw	Maximum
			Oscilloscope			Maximize two waveforms in phase.

Potentiometer for Tape Speed Adjustment



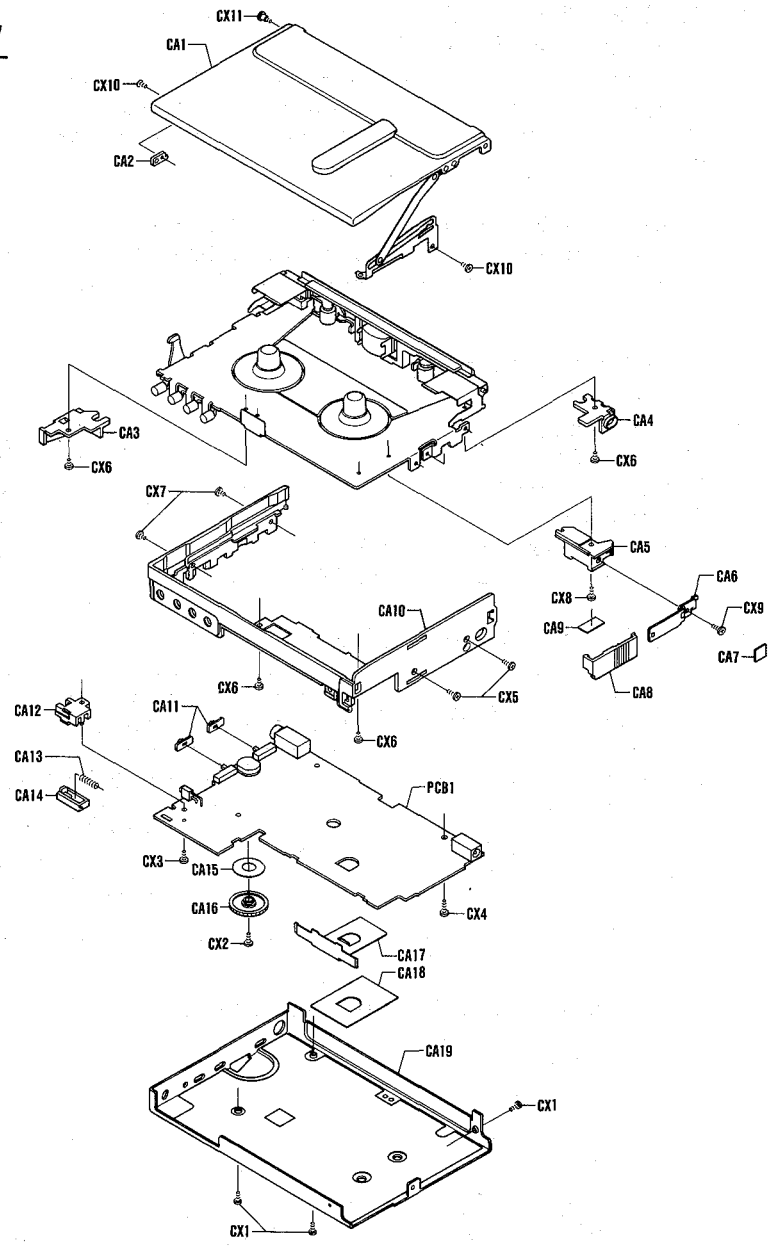
Azimuth Adjusting Holes



PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	PACKAGE		
	141-6-1419-99300	Individual Carton	1
	141-6-1469-31800	Case Styrofoam	1
	141-6-3919-62000	Plain Pad	1
	141-6-2519-05011	Poly Cover 50x110 (Ni-cd Battery)	1
	141-6-2519-12490	Poly Cover (C-Case/Unit)	2
	141-6-4559-03305	Serial No. Sheet	3
	141-6-4559-04111	Label Color BK (Black)	1
	141-6-4559-04107	Label Color WH (White)	1
	141-6-4559-04109	Label Color RD (Red)	1
	ACCESSORIES		
	4-1529-70770	Headphone Assy (Black/Red)	1
	4-1529-70774	Headphone Assy (White)	1
	141-2-4469-63500	Ear Pad	1
	4-1919-72100	AC Adaptor 1.5CV220E	1
	4-2352-03010	Case Battery Socket (Black)	1
	4-2352-03011	Case Battery Socket (White)	1
	4-2352-03013	Case Battery Socket (Red)	1
	4-6629-70230	Ni-cd Battery (NB450)	1
	141-0-1769-01800	Head Band Assy	1
	141-2-1819-21000	Case Carrying	1
	141-6-4729-37901	Label Case Battery	1
	142-6-4119-33700	Sheet Inst	1
	142-6-4119-33774	Instruction Book	1
	CABINET		
CA 1	141-0-1249-48105	Lid Cassette Assy (Black)	1
CA 1	141-0-1249-48110	Lid Cassette Assy (White)	1
CA 1	141-0-1249-48107	Lid Cassette Assy (Red)	1
CA 2	141-2-2529-11600	Lock Plate	1
CA 3	141-0-2149-04800	Bracket Termi Assy	1
CA 4	141-2-2149-33000	Holder Socket	1
CA 5	141-0-2149-04900	Bracket Hinge Assy	1
CA 6	141-2-2519-07100	Hinge	1
CA 7	141-2-4469-63300	Sheet	1
CA 8	141-2-1339-41600	Cap Battery (Black)	1
CA 8	141-2-1339-41601	Cap Battery (White)	1
CA 8	141-2-1339-41603	Cap Battery (Red)	1
CA 9	141-2-4359-49600	Sheet	1
CA10	141-0-1149-19200	Frame Assy (Black)	1
CA10	141-0-1149-19201	Frame Assy (White)	1
CA10	141-0-1149-19203	Frame Assy (Red)	1
CA11	141-2-1649-53300	Knob Slide (Black/Red)	2
CA11	141-2-1649-53301	Knob Slide (White)	2
CA12	141-2-2419-38800	Holder Knob Direction	1
CA13	141-2-8559-19700	Spring Direction	1
CA14	141-2-1659-95100	Knob Direction	1
CA15	141-2-4359-48800	Sheet	1
CA16	141-2-1639-66700	Knob Volume (Black/White)	1
CA16	141-2-1639-66701	Knob Volume (Red)	1
CA17	141-2-3229-66800	Shield Motor	1
CA18	141-2-4359-49200	Insulator	1
CA19	141-0-1129-32104	Cabinet Bottom Assy (Black)	1
CA19	141-0-1129-32105	Cabinet Bottom Assy (White)	1
CA19	141-0-1129-32106	Cabinet Bottom Assy (Red)	1
PCB1	141-0-1939-23860	Amplifier P.C.B. Assy	1
CX 1	411 099 7908	SCR PAN PCS 1.4X2.5 (Black/Red)	3
CX 1	411 017 7904	SCR PAN PCS 1.4X2.5 (White)	3
CX 2	412 021 6907	SPECIAL SCREW	1
CX 3	412 020 2900	SPECIAL SCREW	1
CX 4	412 021 6808	SPECIAL SCREW	1
CX 5	141-2-4219-28401	Screw +PMS M1.4X2.5 (Black/White)	2

CABINET EXPLODED VIEW



Ref. No.	Part No.	Description	Q'ty
CX 5	141-2-4219-28400	Screw +PMS M1.4X2.5 (Red)	2
CX 6	412 020 2801	SPECIAL SCREW	4
CX 7	141-2-4219-24100	Screw +PMS M1.4X1.4	2
CX 8	141-2-4219-26700	Screw +PMS M1.4X2	1
CX 9	141-2-4219-28401	Screw +PMS M1.4X2.5	2
CX10	412 022 4704	SCR FLT PCS 1.4X1.6 (Black/Red)	1
CX10	412 022 4803	SCR FLT PCS 1.4X1.6 (White)	1
CX11	412 020 2702	SPECIAL SCREW (Black/Red)	1
CX11	412 022 3806	SPECIAL SCREW (White)	1

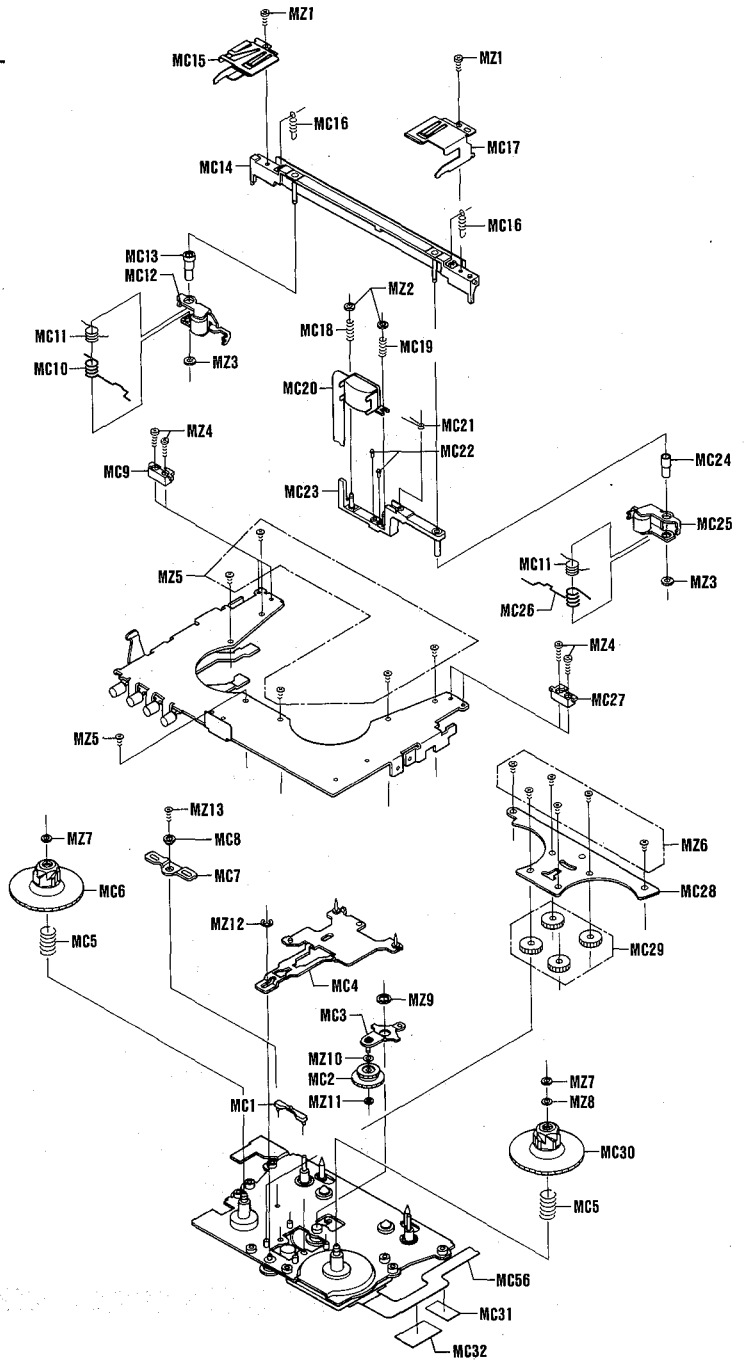
NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

MECHANISM PARTS LIST

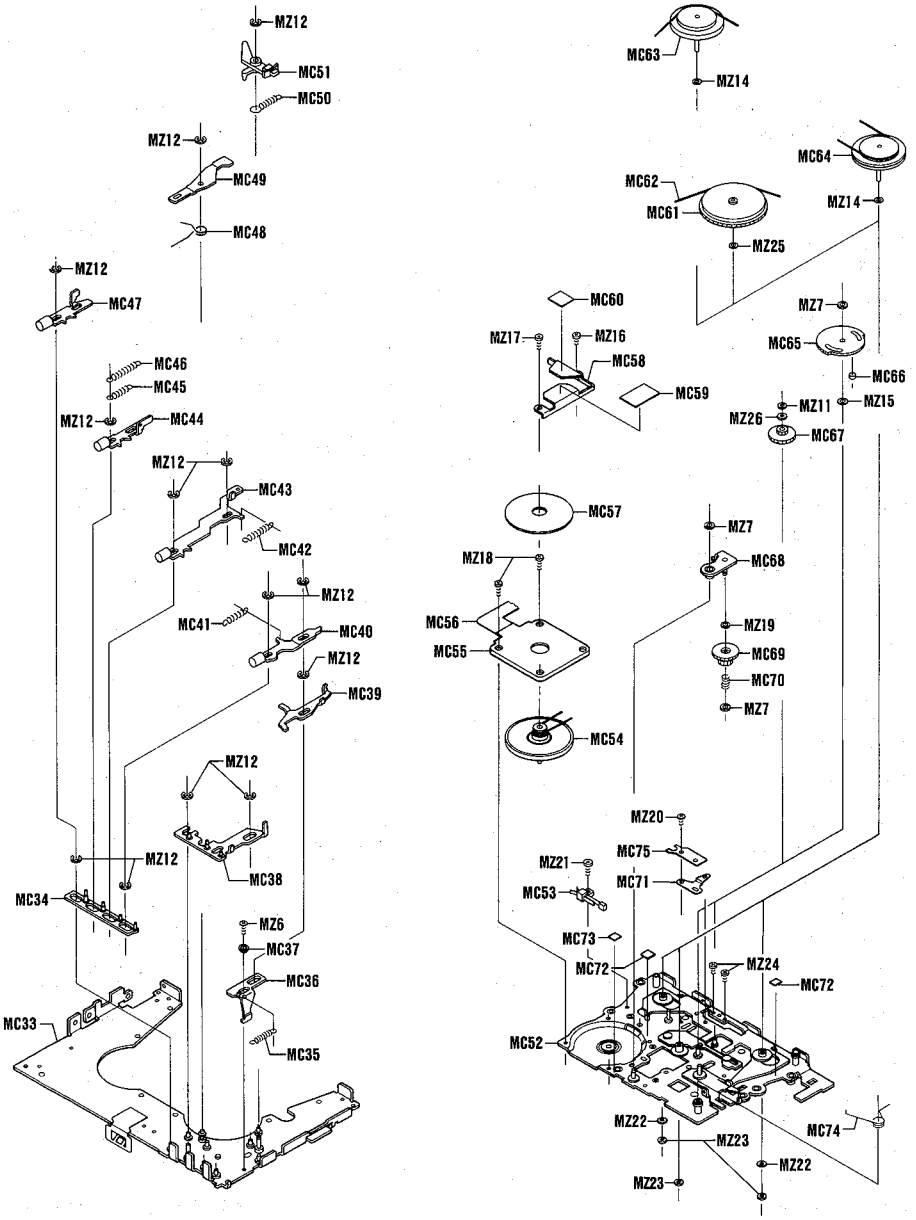
Ref. No.	Part No.	Description	Q'ty
	CASSETTE MECHANISM		
	141-2-2899-13900	Adhesive Sheet (for Head FPC,L)	1
	141-2-2899-23300	Adhesive Sheet (for Head FPC,S)	1
	141-2-2899-19000	Adhesive Sheet (for Motor FPC)	1
MC 1	141-2-3519-85800	Plate Trig Pinch	1
MC 2	141-0-5519-15000	Gear Friction Assy	1
MC 3	141-0-5559-08400	Arm Change Assy	1
MC 4	141-0-7319-36800	Base Slide Assy	1
MC 5	141-2-8559-04000	Spring Switch	2
MC 6	141-0-5519-15200	Gear Reel FWD Assy	1
MC 7	141-2-7439-56900	Arm Play	1
MC 8	141-2-3529-54300	Spacer Arm Play	1
MC 9	141-2-2529-11300	Fix Holder R	1
MC10	141-2-8529-42500	SPG Pinch FWD	1
MC11	141-2-8529-42600	Spring Arm Pinch	2
MC12	141-0-5459-03600	Arm Pinch FWD Assy	1
MC13	141-2-5469-04500	Roller Pinch FWD	1
MC14	141-0-3519-27000	Holder Head Assy (Black)	1
MC14	141-0-3519-27001	Holder Head Assy (White/Red)	1
MC15	141-2-8539-62400	Holder R	1
MC16	141-2-8549-41600	Spring Holder Head	2
MC17	141-2-8539-62500	Holder L	1
MC18	141-2-8559-18900	Spring	1
MC19	141-2-8559-19100	Spring	1
MC20	4-2429-73350	Play Head Assy	1
MC21	141-2-8529-42400	Spring Arm Base	1
MC22	141-2-7539-91100	Pin Azimuth	2
MC23	141-0-7439-21300	Arm Base Assy	1
MC24	141-2-5469-04600	Roller Pinch REV	1
MC25	141-0-5459-03700	Arm Pinch REV Assy	1
MC26	141-2-8529-42700	SPG Pinch REV	1
MC27	141-2-2529-11200	Fix Holder L	1
MC28	141-2-3169-34800	Panel Chassis	1
MC29	141-2-5519-76500	Gear Idle	4
MC30	141-2-5519-75600	Gear Reel REV	1
MC31	141-2-4469-62900	Sheet	1
MC32	141-2-4469-62700	Sheet	1
MC33	141-0-3129-02600	Chassis Frame Assy	1
MC34	141-0-7539-00200	Plate Lock Assy	1
MC35	141-2-8549-42400	Spring Lid Lock	1
MC36	141-2-7319-88800	Plate Lock Lid	1
MC37	141-2-3529-54500	Spacer Lock Lid	1
MC38	141-0-7539-00100	Plate Switch Assy	1
MC39	141-2-7429-07300	Lever Eject	1
MC40	141-0-7359-02100	Rod Stop Assy (Black/White)	1
MC40	141-0-7359-02101	Rod Stop Assy (Red)	1
MC41	141-2-8549-12800	Spring Lever Play	1
MC42	141-2-8549-04000	Spring Lever Stop	1
MC43	141-0-3759-02000	Rod Play Assy (Black/White)	1
MC43	141-0-3759-02001	Rod Play Assy (Red)	1
MC44	141-0-7359-01900	Rod Fast Assy (Black/White)	1
MC44	141-0-7359-01901	Rod Fast Assy (Red)	1
MC45	141-2-8549-18000	Spring Arm Gear	1
MC46	141-2-8519-60600	Spring Tension	1
MC47	141-0-7359-02000	Rod Rewind Assy (Black/White)	1
MC47	141-0-7359-02001	Rod Rewind Assy (Red)	1
MC48	141-2-8529-42800	Spring Rod Fast	1
MC49	141-2-7439-57000	Arm Shut Off	1
MC50	141-2-8549-41500	Spring	1
MC51	141-2-7439-57100	Arm Mode	1
MC52	141-0-3119-28201	Chassis Assy	1
MC53	4-2319-77690	Leaf Switch [S4/Reverse]	1
MC54	141-0-3799-01700	Rotor Comple	1
MC55	4-2649-70910	Coil Assy	1
MC56	4-2262-35090	FPC Motor	1
MC57	141-2-3799-04600	Plate Back-up	1

MECHANISM EXPLODED VIEW



Ref. No.	Part No.	Description	Q'ty
MC58	141-2-3169-35200	Shield Motor	1
MC59	141-2-4359-49500	Sheet	1
MC60	141-2-4359-49400	Sheet	1
MC61	141-0-6619-00600	Pulley Assy	1
MC62	141-2-5649-31000	Belt Drive	1
MC63	141-2-5219-24500	Flywheel REV	1
MC64	141-2-5219-24400	Flywheel FWD	1
MC65	141-2-5519-76200	Gear Reverse	1
MC66	141-2-8259-15100	Roller REV	1
MC67	141-2-5519-76300	Gear Idle Reverse	1
MC68	141-0-5559-08300	Arm Gear Fast Assy	1
MC69	141-2-5519-76400	Gear Fast	1
MC70	141-2-8559-19800	Spring	1
MC71	141-2-8539-63400	Spring Click	1
MC72	141-2-4469-63200	Cushion	2

MECHANISM EXPLODED VIEW (Continued)



MECHANISM PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
MC73	141-2-4469-63100	Cushion	1
MC74	141-2-8529-43000	Spring Shut Off	1
MC75	141-2-3169-36400	Plate	1
MZ 1	412 022 7804	SPECIAL SCREW	2
MZ 2	412 020 3006	SPECIAL WASHER	2
MZ 3	412 023 1306	SPECIAL WASHER	2
MZ 4	412 023 0507	SPECIAL SCREW	4
MZ 5	411 099 7502	SCR FLT PCS 1.4X2.5	6
MZ 6	411 016 9909	SCR FLT PCS 1.4X1.6	7
MZ 7	141-2-4539-17500	Washer	5
MZ 8	141-2-4539-18100	Washer, M1.6x3.0x0.13	2
MZ 9	412 019 9101	SPECIAL WASHER	1
MZ10	412 022 4506	SPECIAL WASHER	1
MZ11	141-2-4539-26200	Washer, M0.95x2.0x0.25	2
MZ12	411 015 7401	RING E 1.2	14
MZ13	412 023 0408	SPECIAL SCREW	1
MZ14	141-2-4539-33100	Washer, M1.2x3.0x0.15	2
MZ15	141-2-4539-30400	Washer, M2.1x3.5x0.1	1
MZ16	411 019 3003	SCR PAN PCS 1.4X1.4	1
MZ17	411 019 4505	SCR PAN PCS 1.4X3	1
MZ18	411 017 7805	SCR PAN PCS 1.4X2.5	2
MZ19	141-2-4539-31700	Washer, M1.5x2.2x0.2	1
MZ20	411 019 3201	SCR PAN PCS 1.4X1.6	1
MZ21	412 023 0705	SPECIAL SCREW	1
MZ22	412 023 2709	SPECIAL WASHER	2
MZ23	412 022 8405	SPECIAL WASHER	3
MZ24	411 017 7300	SCR PAN PCS 1.4X2	2
MZ25	412 023 5908	SPECIAL WASHER	1
MZ26	141-2-4539-31600	Washer, M1.2x3.2x0.1	1

P.C.BOARD PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	AMPLIFIER P.C.B. ASSY		
PCB1	141-0-1939-23860	Amplifier P.C.B. Assy	1
	141-2-1329-22600	Holder Sensor (for HS1)	1
	141-2-4359-49600	Sheet	1
	141-2-4359-49800	Sheet	3
	141-2-4469-63000	Spacer	4
J 1	4-2352-03140	Ext. Power Jack	1
J 2	4-2352-03130	Jack 3P Green (Headphones)	1
S 1	4-2319-79320	Slide Switch (Tape Select)	1
S 2	4-2319-79320	Slide Switch (Dolby NR)	1
S 3	4-2312-06520	Leaf Switch (Power)	1
S 5	4-2312-06510	Leaf Switch (F.FWD)	1
S 6	4-2312-06510	Leaf Switch (Rewind)	1
S 7	4-2312-06510	Leaf Switch (Direction)	1
S 8	4-2312-06510	Leaf Switch (Dry Cell)	1
L301	4-2539-72313	Chip Coil 10μH K	1
L302	4-2539-72313	Chip Coil 10μH K	1
L303	4-2589-73700	OSC Trans D/D	1
P301	4-2229-77411	Potentiometer (B-3kΩ)	1
VR 1	4-2229-76690	Volume Control (A-20kΩx2)	1
HS 1	407 090 7009	SENSOR SHS320-52	1
D301	407 089 1605	ZD 02CZ3.3X(TE85R)	1
D302	407 008 5400	DIODE MA151WK-TW	1
D303	407 089 1407	LED GL2PR9 (Battery)	1
IC301	409 071 6407	IC TA7739F(TP1)	1
IC302	409 119 1609	IC TA7793F(TP1)	1
IC303	409 081 7104	IC LA4535M-TP-T1	1
IC304	409 115 8909	IC TC9305-034	1
IC305	409 119 1500	IC LB1671M-TP-T1	1
Q301	405 034 9508	TR DTC114-YK	1
Q302	405 034 9508	TR DTC114-YK	1
Q303	405 008 7707	TR 2SB815-B7-TA	1
Q304	405 034 9508	TR DTC114-YK	1
Q305	405 034 9508	TR DTC114-YK	1
Q306	405 034 9508	TR DTC114-YK	1
Q307	405 008 7707	TR 2SB815-B7-TA	1
Q308	405 008 7707	TR 2SB815-B7-TA	1
Q309	405 034 9508	TR DTC114-YK	1
Q310	405 034 9508	TR DTC114-YK	1
Q311	405 024 3509	TR 2SD601-R-TW	1
Q312	405 021 2406	TR 2SD1048-X7-TA	1
C101	403 074 9502	CERAMIC 680P K 50V	1
C102	403 074 9502	CERAMIC 680P K 50V	1
C103	404 012 7208	TA-SOLID 22U M 4V	1
C104	403 068 2007	CERAMIC 0.022U K 25V	1
C105	403 068 1505	CERAMIC 0.018U K 25V	1
C106	403 089 5308	TA-SOLID 2.2U M 4V	1
C107	403 089 5308	TA-SOLID 2.2U M 4V	1
C108	403 075 5305	CERAMIC 8200P K 50V	1
C109	403 073 0005	CERAMIC 3300P K 50V	1
C110	403 067 9304	CERAMIC 0.01U K 25V	1
C111	403 090 3201	TA-SOLID 1U M 10V	1
C112	403 091 8809	TA-SOLID 0.47U M 25V	1
C113	403 089 6206	TA-SOLID 4.7U M 4V	1
C114	403 090 3201	TA-SOLID 1U M 10V	1
C115	403 069 1702	CERAMIC 1000P K 50V	1
C116	403 068 0508	CERAMIC 0.1U Z 25V	1
C201	403 074 9502	CERAMIC 680P K 50V	1
C202	403 074 9502	CERAMIC 680P K 50V	1
C203	404 012 7208	TA-SOLID 22U M 4V	1
C204	403 068 2007	CERAMIC 0.022U K 25V	1
C205	403 068 1505	CERAMIC 0.018U K 25V	1
C206	403 089 5308	TA-SOLID 2.2U M 4V	1
C207	403 089 5308	TA-SOLID 2.2U M 4V	1
C208	403 075 5305	CERAMIC 8200P K 50V	1
C209	403 073 0005	CERAMIC 3300P K 50V	1

Ref. No.	Part No.	Description	Q'ty
C210	403 067 9304	CERAMIC 0.01U K 25V	1
C211	403 090 3201	TA-SOLID 1U M 10V	1
C212	403 091 8809	TA-SOLID 0.47U M 25V	1
C213	403 089 6206	TA-SOLID 4.7U M 4V	1
C214	403 090 3201	TA-SOLID 1U M 10V	1
C215	403 069 1702	CERAMIC 1000P K 50V	1
C216	403 068 0508	CERAMIC 0.1U Z 25V	1
C301	404 012 7208	TA-SOLID 22U M 4V	1
C302	403 069 1702	CERAMIC 1000P K 50V	1
C303	404 012 7208	TA-SOLID 22U M 4V	1
C304	404 028 7308	TA-SOLID 10U M 4V	1
C305	404 012 7208	TA-SOLID 22U M 4V	1
C306	403 038 0705	ELECT 47U M 4V	1
C307	404 028 7308	TA-SOLID 10U M 4V	1
C308	403 038 0705	ELECT 47U M 4V	1
C309	4-2239-71961	Capacitor CD 220μF 4V	1
C310	4-2239-71961	Capacitor CD 220μF 4V	1
C312	403 068 1000	CERAMIC 0.012U K 25V	1
C313	403 068 0508	CERAMIC 0.1U Z 25V	1
C314	403 068 0409	CERAMIC 0.1U Z 25V	1
C316	403 068 0409	CERAMIC 0.1U Z 25V	1
C318	403 068 0409	CERAMIC 0.1U Z 25V	1
C320	403 090 3201	TA-SOLID 1U M 10V	1
C321	404 031 0808	CERAMIC 0.47U Z 50V	1
C322	403 067 9304	CERAMIC 0.01U K 25V	1
C323	403 068 2007	CERAMIC 0.022U K 25V	1
C324	403 068 2007	CERAMIC 0.022U K 25V	1
C325	404 028 7308	TA-SOLID 10U M 4V	1
C326	403 073 0005	CERAMIC 3300P K 50V	1
C327	403 068 2007	CERAMIC 0.022U K 25V	1
C328	404 028 7308	TA-SOLID 10U M 4V	1
C329	403 067 9304	CERAMIC 0.01U K 25V	1
C330	403 089 5605	TA-SOLID 3.3U M 4V	1
C331	403 089 5605	TA-SOLID 3.3U M 4V	1
C332	403 089 5605	TA-SOLID 3.3U M 4V	1
R101	402 018 3804	MT-GLAZE 100 JA 1/10W	1
R102	402 018 6706	MT-GLAZE 6.8K JA 1/10W	1
R103	402 018 4108	MT-GLAZE 100K JA 1/10W	1
R104	402 018 4900	MT-GLAZE 180K JA 1/10W	1
R105	402 018 6102	MT-GLAZE 3.9K JA 1/10W	1
R106	402 018 5600	MT-GLAZE 3.3K JA 1/10W	1
R107	402 018 5709	MT-GLAZE 33K JA 1/10W	1
R108	402 018 5709	MT-GLAZE 33K JA 1/10W	1
R109	402 018 5709	MT-GLAZE 33K JA 1/10W	1
R110	402 035 2101	MT-GLAZE 13K JA 1/10W	1
R111	402 023 3202	MT-GLAZE 390K JA 1/10W	1
R112	402 018 3903	MT-GLAZE 1K JA 1/10W	1
R113	402 018 5402	MT-GLAZE 3.9 JA 1/10W	1
R114	402 018 7307	MT-GLAZE 0 JA 1/8W	1
R201	402 018 3804	MT-GLAZE 100 JA 1/10W	1
R202	402 018 6706	MT-GLAZE 6.8K JA 1/10W	1
R203	402 018 4108	MT-GLAZE 100K JA 1/10W	1
R204	402 018 4900	MT-GLAZE 180K JA 1/10W	1
R205	402 018 6102	MT-GLAZE 3.9K JA 1/10W	1
R206	402 018 5600	MT-GLAZE 3.3K JA 1/10W	1
R207	402 018 5709	MT-GLAZE 33K JA 1/10W	1
R208	402 018 5709	MT-GLAZE 33K JA 1/10W	1
R209	402 018 5709	MT-GLAZE 33K JA 1/10W	1
R210	402 035 2101	MT-GLAZE 13K JA 1/10W	1
R211	402 023 3202	MT-GLAZE 390K JA 1/10W	1
R212	402 018 3903	MT-GLAZE 1K JA 1/10W	1
R213	402 018 5402	MT-GLAZE 3.9 JA 1/10W	1
R214	402 018 7307	MT-GLAZE 0 JA 1/8W	1
R301	402 018 3903	MT-GLAZE 1K JA 1/10W	1
R302	402 018 3804	MT-GLAZE 100 JA 1/10W	1
R303	402 018 4801	MT-GLAZE 18K JA 1/10W	1

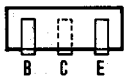
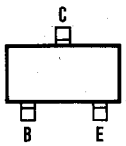
P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
R304	402 022 8703	MT-GLAZE 180 JA 1/10W	1
R305	402 018 4009	MT-GLAZE 10K JA 1/10W	1
R306	402 018 6201	MT-GLAZE 4.7K JA 1/10W	1
R307	402 028 6208	MT-GLAZE 220 JA 1/10W	1
R308	402 018 6300	MT-GLAZE 47K JA 1/10W	1
R309	402 022 9205	MT-GLAZE 470 JA 1/10W	1
R310	402 018 4009	MT-GLAZE 10K JA 1/10W	1
R311	402 018 6300	MT-GLAZE 47K JA 1/10W	1
R312	402 018 4009	MT-GLAZE 10K JA 1/10W	1
R313	402 024 1900	MT-GLAZE 680 JA 1/10W	1
R314	402 018 3903	MT-GLAZE 1K JA 1/10W	1
R315	402 018 6508	MT-GLAZE 5.6K JA 1/10W	1
R316	402 018 4405	MT-GLAZE 12K JA 1/10W	1
R317	402 018 5709	MT-GLAZE 33K JA 1/10W	1
R318	402 018 5501	MT-GLAZE 330 JA 1/10W	1
R319	402 018 4009	MT-GLAZE 10K JA 1/10W	1
R320	402 018 3705	MT-GLAZE 10 JA 1/10W	1
R321	402 018 6102	MT-GLAZE 3.9K JA 1/10W	1
R322	402 018 6201	MT-GLAZE 4.7K JA 1/10W	1
R323	402 018 3903	MT-GLAZE 1K JA 1/10W	1
R324	402 018 7307	MT-GLAZE 0 JA 1/8W	1
R325	402 018 4405	MT-GLAZE 12K JA 1/10W	1
R326	402 018 6706	MT-GLAZE 6.8K JA 1/10W	1
R327	402 035 2309	MT-GLAZE 75K JA 1/10W	1
R328	402 018 4603	MT-GLAZE 15K JA 1/10W	1
R329	402 035 3603	MT-GLAZE 8.2 JA 1/8W	1
R330	402 035 3603	MT-GLAZE 8.2 JA 1/8W	1
R331	402 018 3606	MT-GLAZE 0 JA 1/10W	1

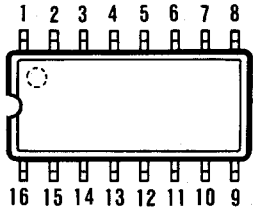
NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

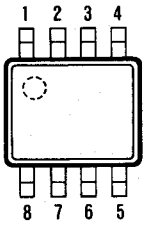
IC & TRANSISTOR LEAD IDENTIFICATION

TRANSISTOR	FRONT VIEW	BOTTOM VIEW
DTC114Y 2SB815 2SD601 2SD1048		
TERMINAL NAME		
B → BASE C → COLLECTOR E → EMITTER		

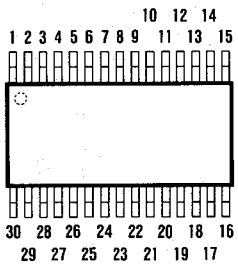
TA7739F
TC9305-034 } **BOTTOM VIEW**
TA7793F



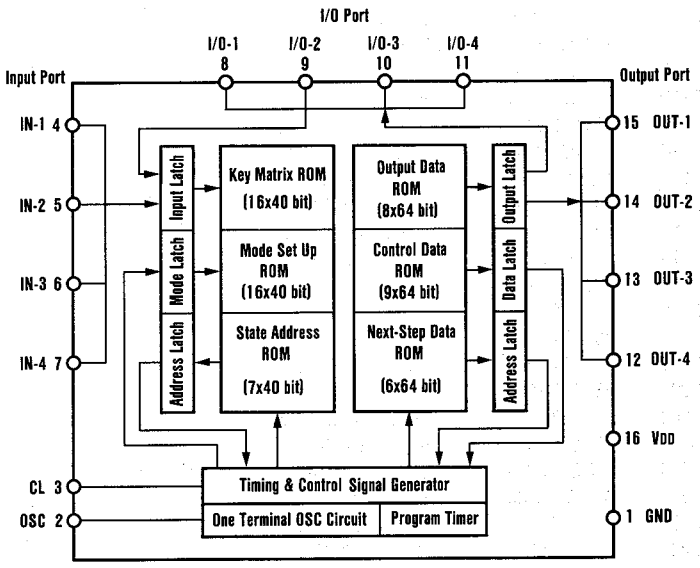
LA4535M BOTTOM VIEW



LB1671M BOTTOM VIEW

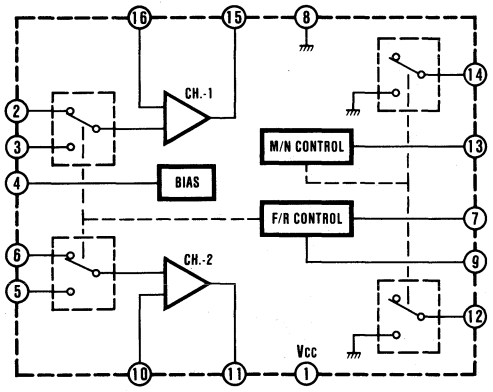


TC9305-034 BLOCK DIAGRAM

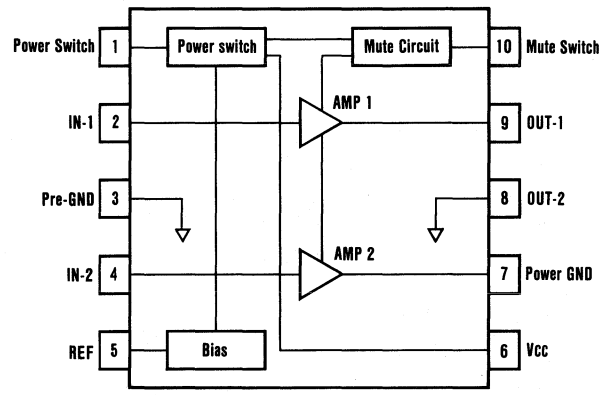


IC & TRANSISTOR LEAD IDENTIFICATION (Continued)

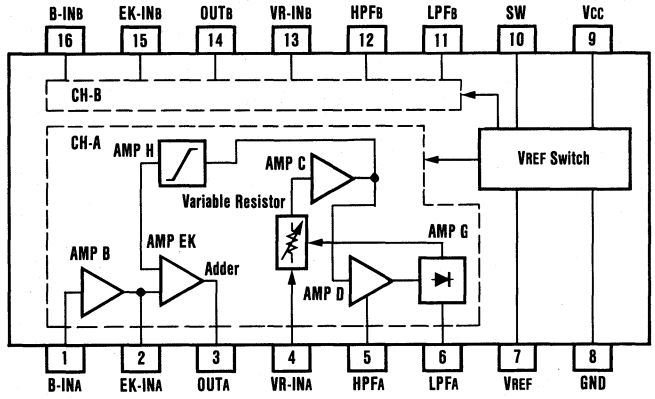
TA7739F BLOCK DIAGRAM



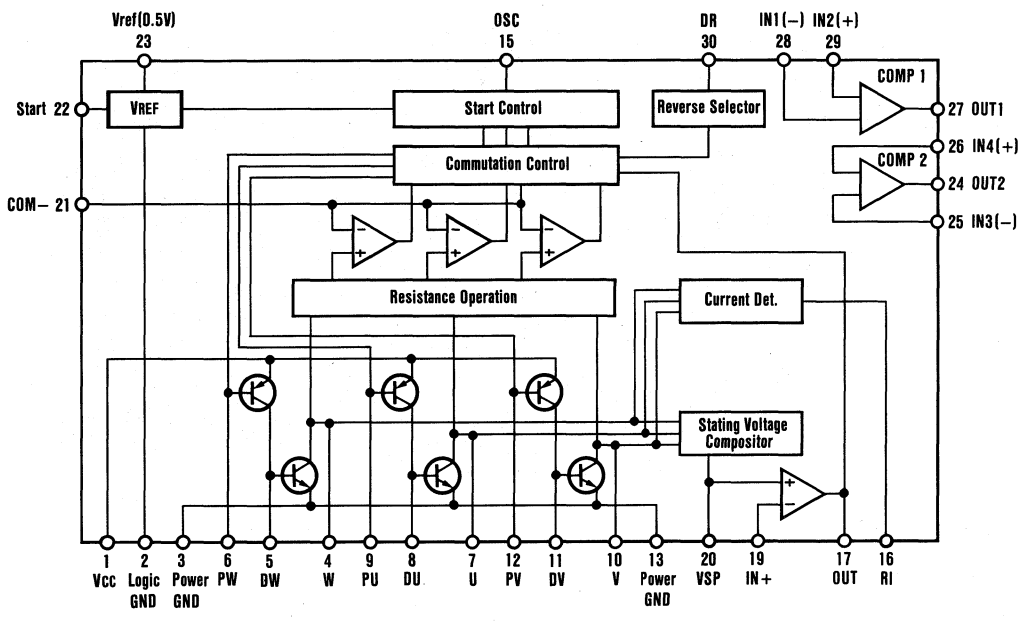
LA4535M BLOCK DIAGRAM



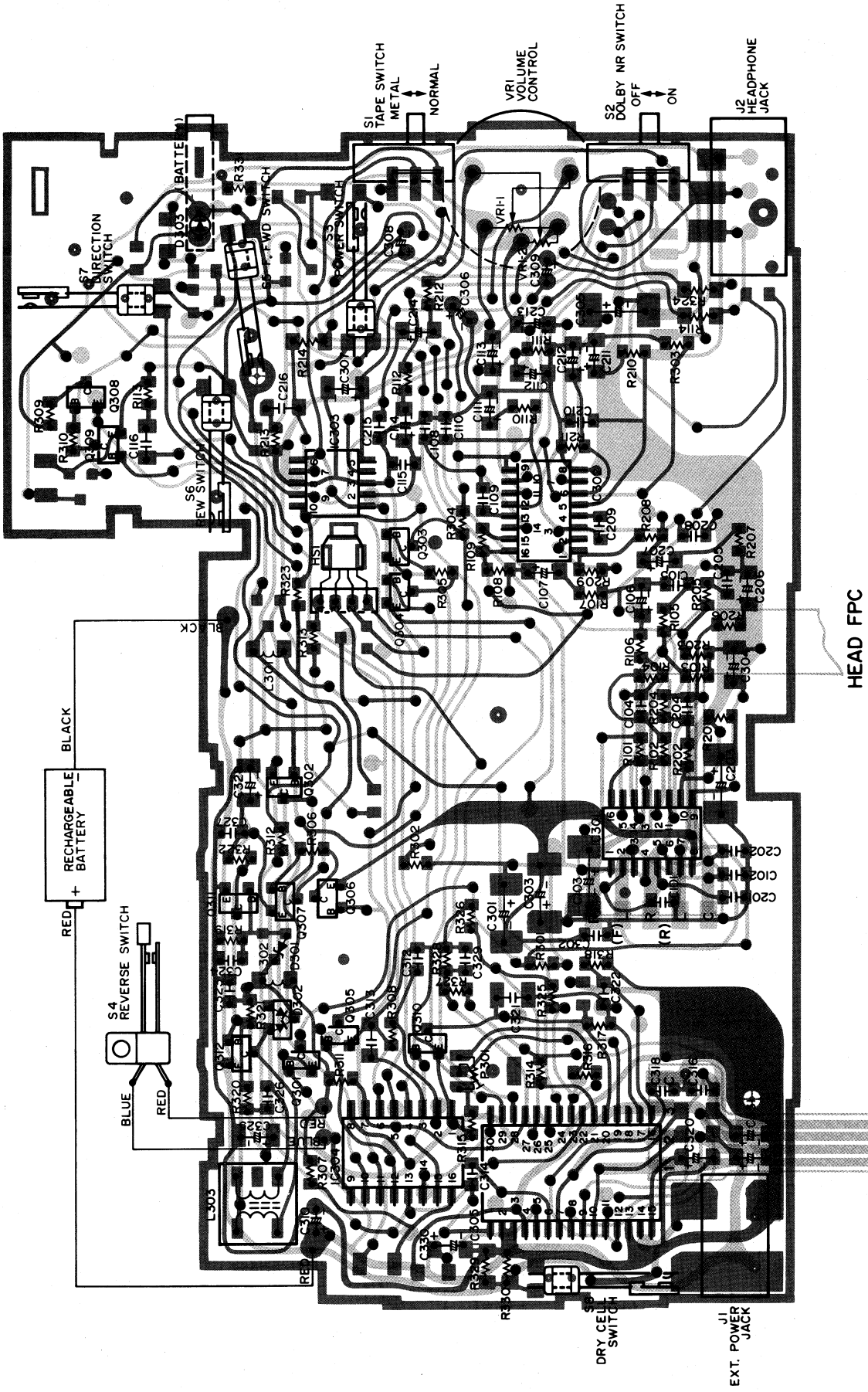
TA7793F BLOCK DIAGRAM



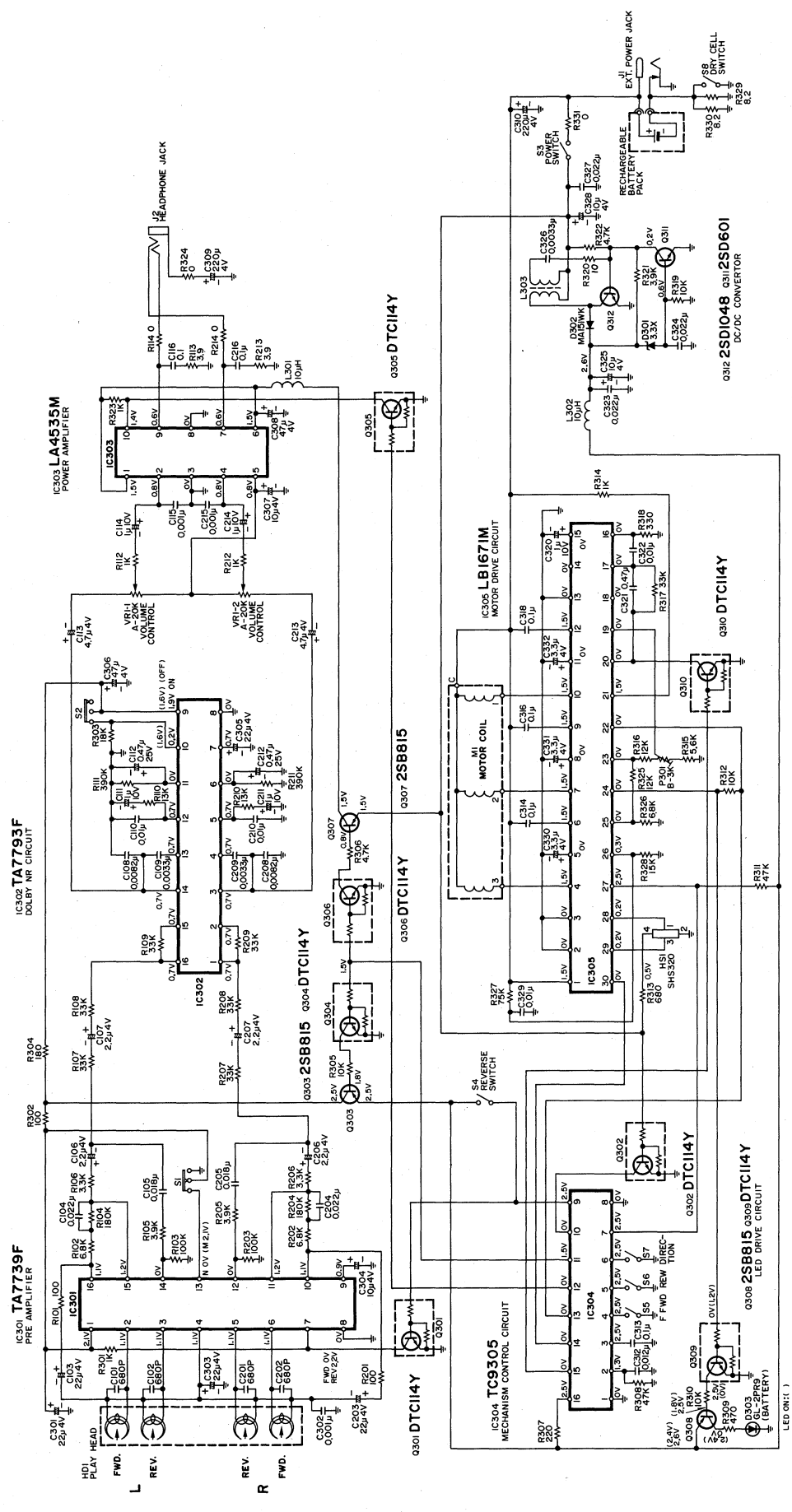
LB1671M BLOCK DIAGRAM



P.C.BOARD & WIRING DIAGRAM



SCHEMATIC DIAGRAM



No.	Name	Position
S1	Tape Select Switch	NORMAL
S2	Dolby NR Switch	OFF
S3	Power Switch	OFF
S4	Reverse Switch	OFF
S5	F.FWD Switch	OFF
S6	Rewind Switch	OFF
S7	Tape Direction Switch	OFF
S8	Dry Cell Switch	OFF

NOTE:
The Voltage is measured resulted by removing the P.C.Board and adding the +B(1.5V) to Pin 11 of IC304.

REFERENCE VOLTAGES

IC301

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Forward	2.1	1.1	1.1	1.1	1.1	1.1	0	0	0.9	1.1	1.2	0	0	0	1.2	1.1
Reverse	〃	〃	〃	〃	〃	〃	2.2	〃	〃	〃	〃	〃	〃	〃	〃	〃
Metal	〃	〃	〃	〃	〃	〃	〃	〃	〃	〃	〃	〃	2.1	〃	〃	〃

IC302

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Dolby ON	0.7	0.7	0.7	0.7	0.7	0	0.7	0	1.9	0.2	0	0.7	0.7	0.7	0.7	0.7
Dolby OFF	〃	〃	〃	〃	〃	〃	〃	〃	1.6	1.6	〃	〃	〃	〃	〃	〃

IC303

	1	2	3	4	5	6	7	8	9	10
Playback	1.5	0.8	0	0.8	0.8	1.5	0.6	0	0.6	1.4

IC304

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Playback	0	1.3	2.5	2.5	2.5	2.5	2.5	0	2.5	0	1.5	0	0	0	0	2.5

IC305

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Playback	1.5	0	0	1.5	0	1.5	1.5	0	1.5	1.5	0	1.5	0	0	0

IC305

	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Playback	0	0	0	0	0	1.5	0	0	0	0	0.3	2.5	0.2	0.2	0

	Q301			Q303			Q307			Q311			Q312		
	B	C	E	B	C	E	B	C	E	B	C	E	B	C	E
Forward	2.5	0	0	1.8	2.5	2.5	0.8	1.5	1.5	0.6	0.2	0	0.2	2.6	0
Reverse	2.5	2.2	0	〃	〃	〃	〃	〃	〃	〃	〃	〃	〃	〃	〃

	Q308			Q309		
	B	C	E	B	C	E
LED ON	1.8	2.4	2.4	1.2	0	0
LED OFF	2.5	0	2.6	0	2.5	〃

NOTE:
The Voltage is measured resulted by removing the P.C.Board and adding the +B(1.5V) to Pin 11 of IC304.

SANYO Electric Co., Ltd.
OSAKA, JAPAN

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